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An Essay  
on the  
Modus operandi of Emetics.

By

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of

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Among the numerous and important remedies which the "dispenser of all good," has deemed fit to bestow on man for the relief of his sufferings, emetics hold not the least distinguished rank. Disseminated as they are through the mineral and vegetable kingdoms, there is no land so miswalled as to be destitute of them.

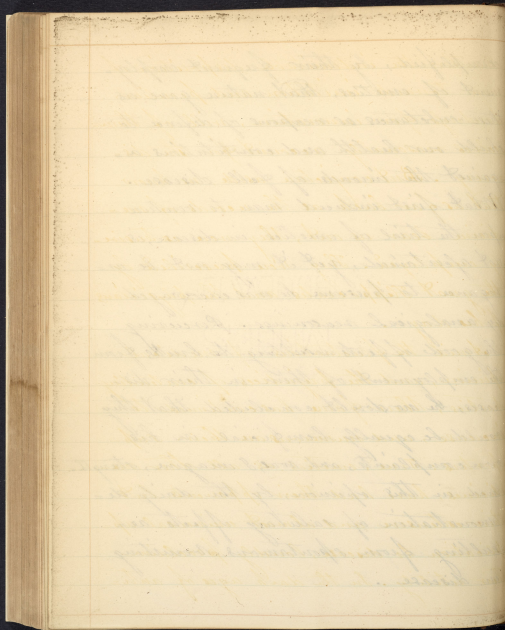
In the first ages of created time, ere yet the bright torch of science began to illumine man's dusky path, we see him led, as it were by intuition, to seek relief in his corporeal afflictions from emetic substances. And man is not the only creature that makes frequent calls upon this source for remedial assistance. In the brute creation the truth is daily

The first of these is the fact that the  
 government has been unable to raise  
 the necessary funds to meet its  
 obligations. This is due to a  
 number of causes, the most important  
 of which are the following:



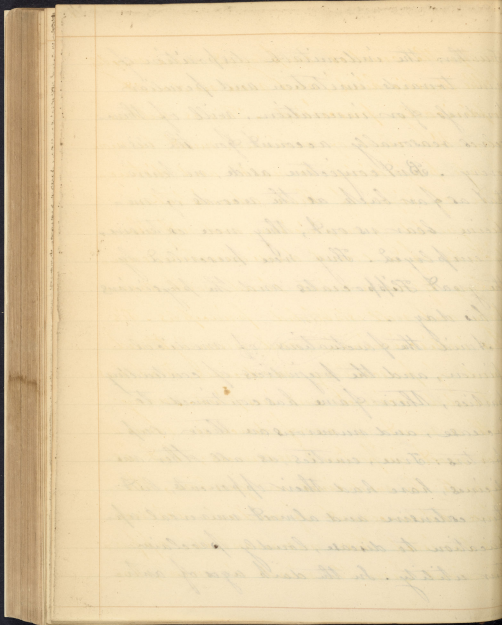
accomplished, by their frequent employment of emetics, that nature gave us these substances as weapons of defence to shield our health and constitutions against the inroads of fell disease.

What first induced man to venture upon the trial of emetics in disease, is not ascertained, yet it may not be arrogant to presume he was encouraged by analogical reasonings. Perceiving the good effects resulting to brutes from the employment of them in their diseases, he no doubt concluded that they would be equally beneficial in his own complaints, and was, I imagine, strengthened in this opinion, by the daily demonstration of salutary effects resulting from spontaneous vomiting in disease.

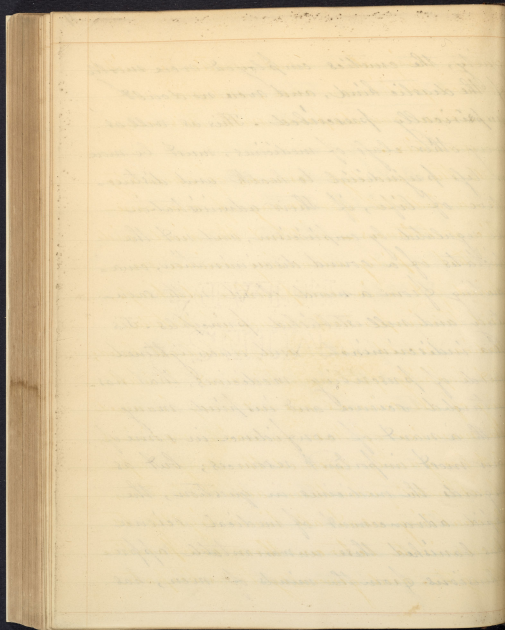


Further the indomitable disposition of man towards imitation and peculiar fondness for innovation, will of themselves reasonably account for the discovery. But conjecture aside, we know that as far back as the records of medicine bear us out, they were extensively employed. They were prescribed by the great Hippocrates and the physicians of his day.

Amid the fluctuations of medical opinion, and the prejudices of contending parties, their fame has continued to increase, and numerous are their supporters: True, emetics, as all other medicines, have had their opponents, but their extensive and almost universal application to disease, loudly proclaim their utility. In the dark ages of anti-



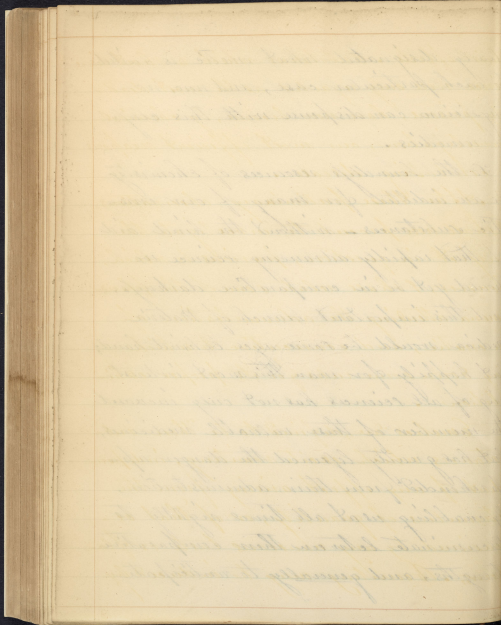
quity, the emetics employed were mostly  
of the drastic kind, and even no doubt  
empirically prescribed. This as well as  
every other class of medicines, must be more  
or less prejudicial to health and distinc-  
tive of life, if their administration  
be regulated by empiricism, and not the  
dictates of a sound discrimination, ema-  
nating from a mind stored with salu-  
tary and well established principles. 'Tis  
this indiscriminate and unenlightened  
mode of prescribing medicines, that has  
retarded science and inspired many  
with a want of confidence in some of  
our most important resources; but as  
regards the medicines in question, the  
rapid advancement of medical science  
has banished these unwarrantable appre-  
hensions from the minds of men, has



5  
clearly designated what emetic is suited  
to each particular case, and now, no  
physicians can dispense with this class  
of remedies.

To the boundless resources of chemistry  
we are indebted for many of our eme-  
tic substances - without the kind aid  
of that rapidly advancing science we  
should yet be in comparative darkness,  
and this important branch of Materia  
Medica would be some ages behind hand;  
but happily for man this most interest-  
ing of all sciences has not only increased  
the number of these valuable medicines,  
but has greatly lessened the danger ap-  
prehended from their administration,  
by enabling us at all times rightly to  
discriminate between their comparative  
strengths, and generally to anticipate



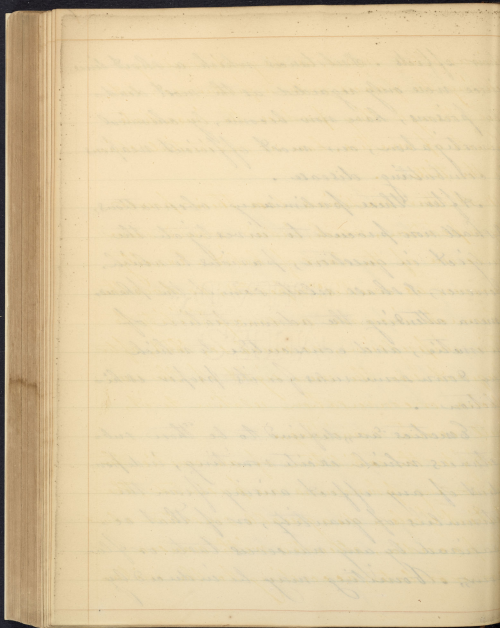




their effects. Substances which a short time since were only regarded as the most deadly poisons, have now become, by chemical investigation, our most efficient weapons in combating disease.

After these preliminary observations, I shall now proceed to investigate the subject in question, previous to which, however, I shall relate some of the phenomena attending the administration of an emetic, and consecutive to which lay down some rules for its proper exhibition.

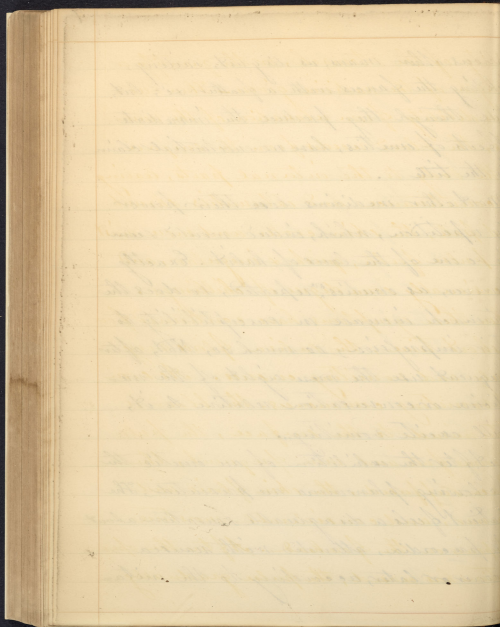
Emetics are, defined to be those substances which excite vomiting, independent of any effect arising from the stimulus of quantity, or of that occasioned by any nauseous taste or flavour. Vomiting may be induced by



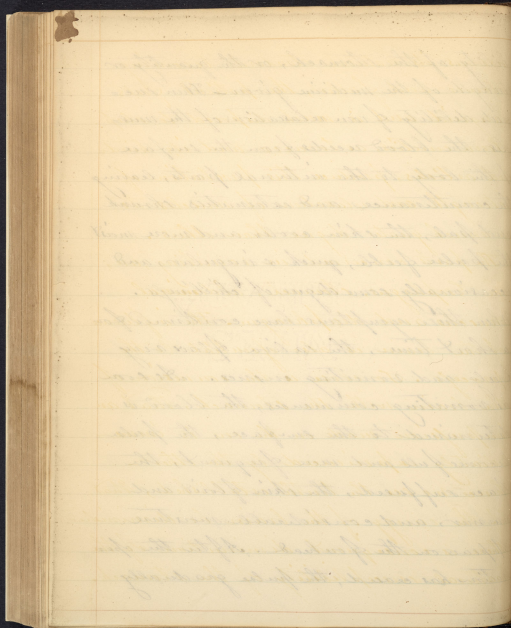
various other means, as disgust, sailing,  
tickling the fancies with a feather &c; but,  
these, though they produce the immediate  
effects of emetics, have no substantial claim  
to the title.

Most other medicines lose their power  
by repetition, which, indeed would seem  
to be one of the laws of habit. Exactly  
however, as emetics are repeated, so does the  
stomach increase in susceptibility to  
their impression, so much so, that, after  
frequent use the mere sight of the me-  
dicine or conversation relative to it,  
will excite vomiting.

After the exhibition of an emetic the  
following phenomena are presented; The  
patient feels a disagreeable sensation about  
the præcordia, attended with nausea  
sooner or later, according to the irrita-

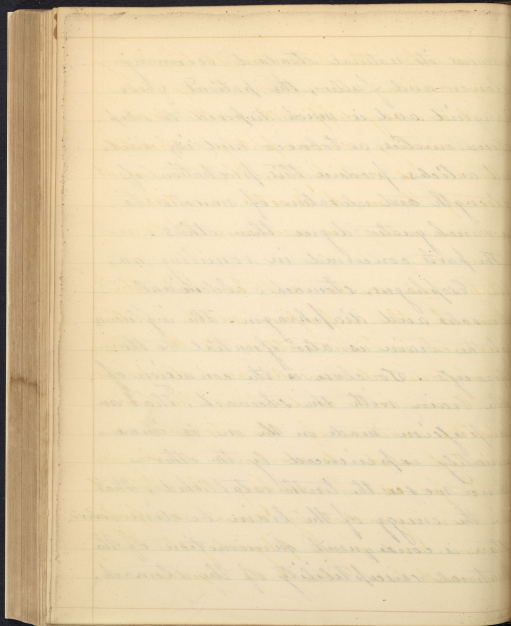


bility of the stomach, or the quantity or strength of the medicine given - Then succeeds debility from relaxation of the muscles, the blood recedes from the surface of the body to the internal parts, leaving the countenance and extremities shrunk and pale, the skin cooler and more moist the pulse feeble, quick & irregular, and occasionally some degree of chilliness. When these symptoms have continued for a short time, the saliva flows very freely and vomiting ensues. As soon as vomiting commences, the blood is determined to the surface, the pulse becomes full and more frequent, the face suffused, the skin florid and warmer, and considerable moisture appears on the forehead. After the operation has ceased, the pulse gradually



resumes its natural standard becoming slower and fuller, the patient feels languid and is much disposed to sleep. Some emetics, as tobacco and its kindred articles, produce this prostration of strength and relaxation of muscles to a much greater degree than others.

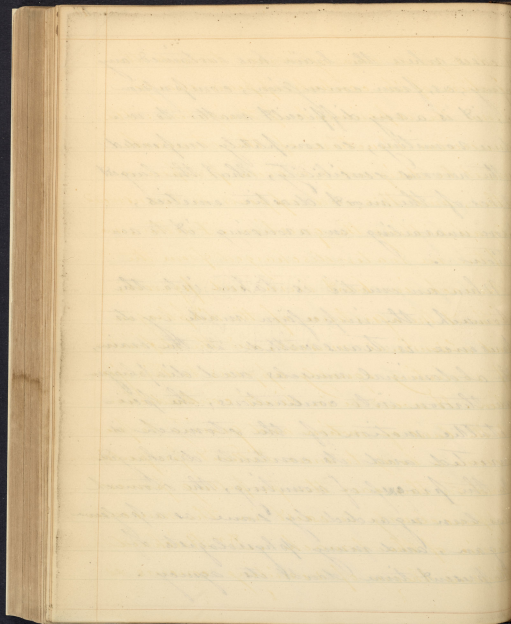
The parts concerned in vomiting, are, the Esophagus, stomach, abdominal muscles and diaphragm. The influence of the brain is also essential to the process. So close is the connexion of the brain with the stomach, that an impression made on the one is immediately experienced by the other - hence we see the truth established, that if the energy of the brain be diminished, there is consequent diminution of the natural susceptibility of the stomach,



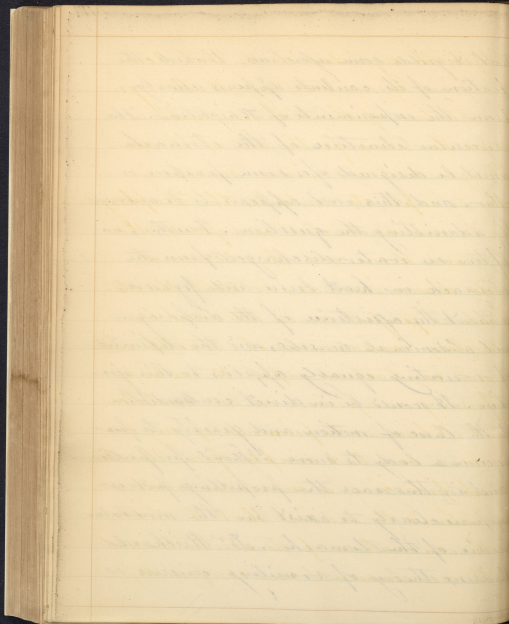


In cases where the brain has sustained any injury, as, from concussion, compression &c., it is a very difficult matter to induce vomiting; so completely suspended is the nervous sensibility, that the largest doses of the most drastic emetics, prove unavailing in arousing it to action.

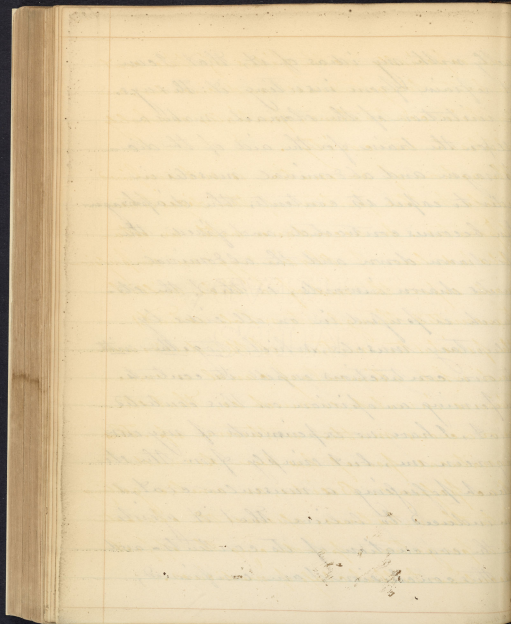
When an emetic is taken into the stomach, the impression made by its presence is transmitted to the brain, the abdominal muscles and diaphragm are thrown into contractions, the peristaltic motion of the stomach is inverted and its contents discharged. In the process of vomiting, the stomach has been regarded by some as a passive organ, and many physiologists of the present time doubt its agency.



That it yields some assistance towards the  
ejection of its contents appears clearly  
from the experiments of Haughton. The  
muscular structure of the stomach  
must be designed for some purpose or  
other, and this end appears to be answered  
by admitting the question. Further, we  
often see water discharged from the  
stomach in heart burn and pyrosis,  
without the assistance of the diaphragm  
and abdominal muscles, and the definition  
of vomiting equally applies to this ejection.  
It would be in direct contradiction  
to the laws of motion and gravity to per-  
suade a body to move without propulsion,  
and in this case the propelling power  
appears clearly to exist in the muscular  
tunic of the stomach. Dr. Richard  
Harrison's theory of vomiting concurs so



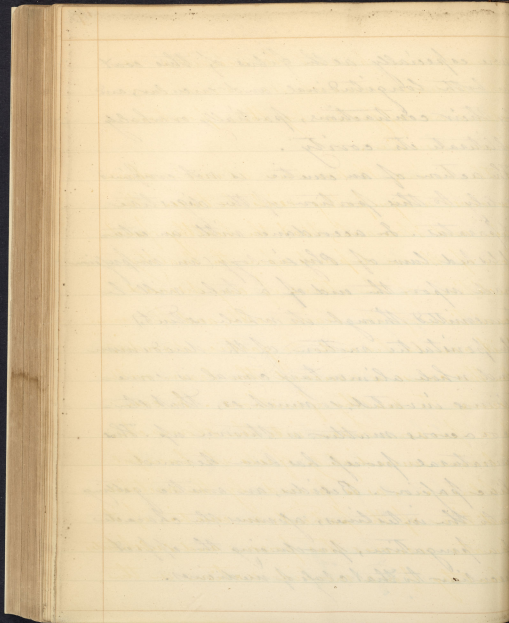
exactly with my ideas of it, that I can  
not refrain from inserting it: He says,  
the irritation of the stomach makes a  
call upon the brain for the aid of the dia-  
phragm and abdominal muscles in  
order to expel its contents; the diaphragm  
then becomes contracted and fixed, the  
ribs drawn down and the abdominal  
muscles drawn inwards, so that the sto-  
mach is pressed in on all sides by  
voluntary muscles, which, together with  
its own contractions expell its contents.  
In forming an opinion on this contested  
point, I have no experiments of my own  
to govern me, but simply from the sto-  
mach possessing a muscular coat, I  
am induced to believe that it assists  
in the evacuation of its contents - and  
in this conclusion I am confirmed,



more especially as the fibres of this coat are both longitudinal and circular, and by their contractions, partially or wholly obliterate its cavity.

The action of an emetic is not confined solely to this portion of the digestive apparatus. In accordance with an established law of Physiology (an impression made upon the end of a tube will be transmitted through its whole extent,) the peristaltic motion of the duodenum and whole alimentary canal is sometimes inverted, so much so, that stercoraceous matter is thrown up. This unnatural process has been termed *iliac passion*. Besides, an emetic getting into the intestines, assumes the character of a purgative, producing the effect peculiar to that class of medicines.

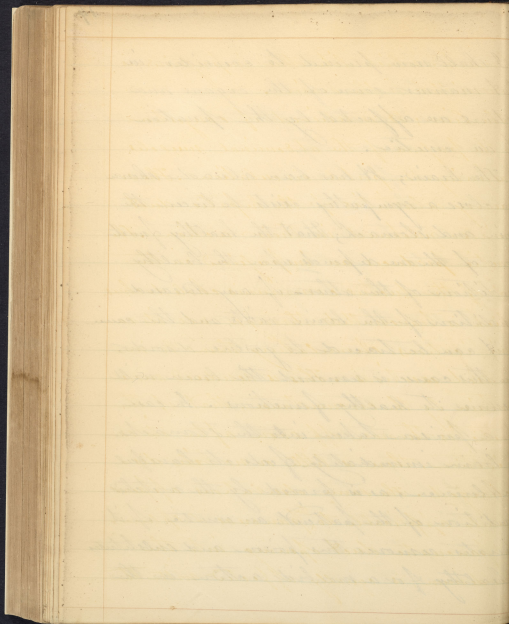






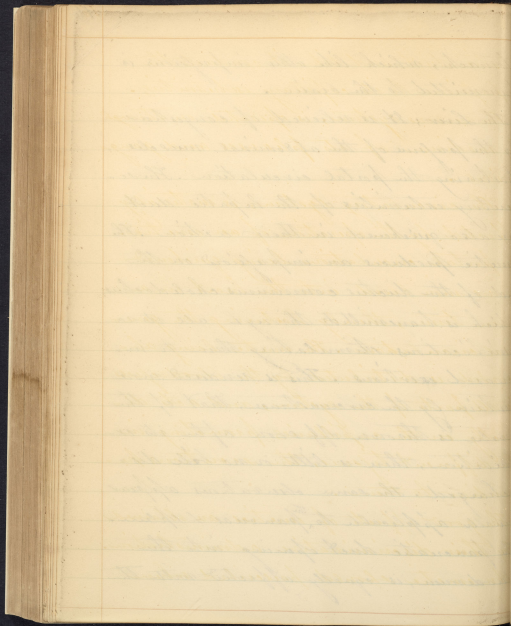
I shall now proceed to consider in what manner some of the organs and systems are affected by the operation of an emetic.

1: The brain; It has been already shown how close a sympathy exists between the brain and stomach; that the healthy functions of the one depends upon the healthy condition of the other - if any diseased condition of the brain exists, and the cause of it can be traced to gastric disorder, when this cause is removed the brain will resume its healthy functions. In case of a poison taken into the stomach, the brain immediately feels its baneful influence, as is proved by the wretched condition of the patient; an emetic, if it operates removes this poison and substitutes a healthy for a morbid action in the



stomach, which like other impressions is transmitted to the brain.

3: The Liver; It is relieved of congestion by the pressure of the abdominal muscles hastening the portal circulation. The secretory catenities of the hepatic duct are also quickened in their action. The emetic produces an impression on the end of the ductus communis choledochus, which is transmitted through all its ramifications, stimulating them to increased exertions. This is rendered more certain by the circumstance, that if the emetic is thrown off soon after its exhibition, there is little or no bile discharged. The same observations appear equally applicable to <sup>the</sup> pancreas & spleen. The pancreatic duct opening into the duodenum, is equally affected with the

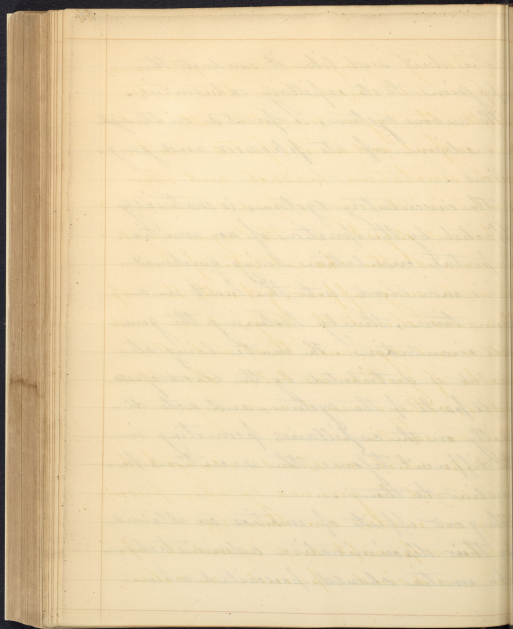


hepatic duct and like it conducts the impulsion to its capillary extremities.

3: The nervous system, is operated on through the medium of its plexuses and ganglions.

4: The circulatory system, is materially affected by the operation of an emetic. The portal circulation being quickened throws more blood into the heart in a given time, thereby hastening the general circulation. The emetic being absorbed is distributed by the blood vessels to all parts of the system, and acts directly on the capillaries promoting in the different tissues, the secretions peculiar to them.

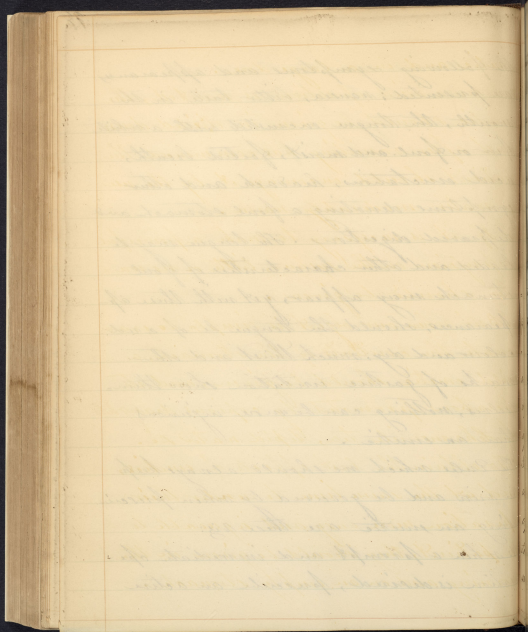
The good effects of emetics are obtained by their discriminative administration. An emetic should be prescribed when



The following symptoms and appearances are presented; nausea, bitter taste in the mouth, the tongue encrusted with a white film or foul and moist, foetid breath, acid eructations, headache and other symptoms denoting a foul stomach and depraved digestion. The tongue may be loaded and other characteristics of foul stomach may appear, yet with these appearances, should the tongue be of a red colour and dry, much thirst and other marks of gastric irritation show themselves, nothing can be more injurious than an emetic.

The rule which we should always keep in view and be governed by when prescribing an emetic are three viz:

1. when a prompt and immediate operation is desired, prescribe an active





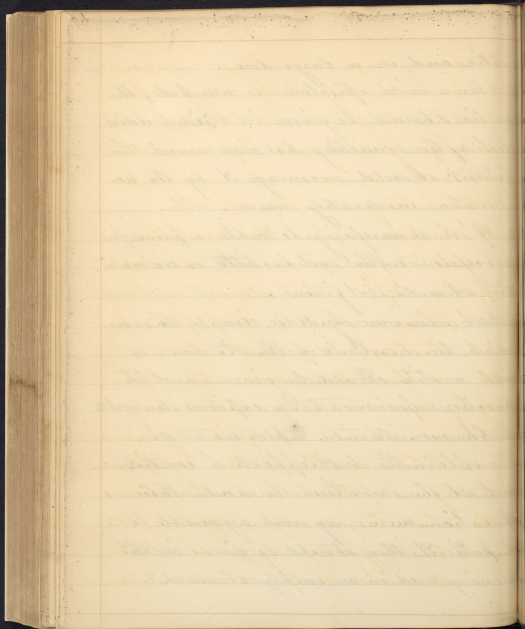
emetic and in a large dose.

2: When a mild operation is wanted, the emetic should be given in divided doses; and after vomiting has commenced the patient should encourage it by the use of water moderately warm.

3: If it is necessary to make a powerful impression on the system, little or no water should be given.

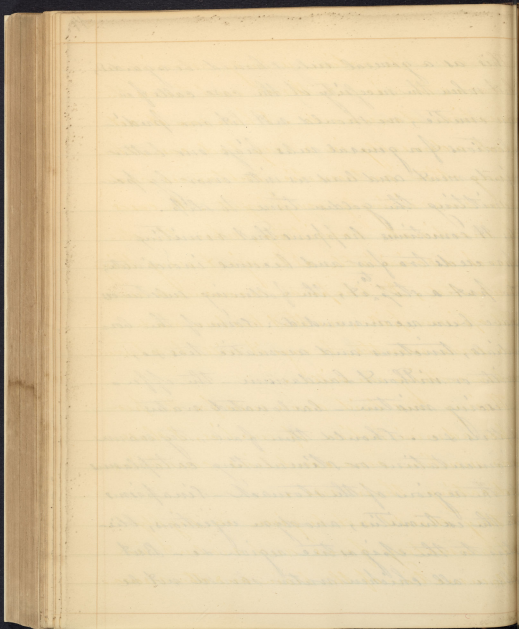
4: But when our object is simply to evacuate the contents of the stomach, a mild emetic should be given, and its operation promoted by copious draughts of chamomile tea, tepid water &c.

5 To obtain the best effects of emetics, and at the same time to render their operation more easy and agreeable to the patient, they should be given in the morning and on an empty stomach.



This as a general rule should be regarded, but when the necessity of the case calls for an emetic, we should not let our predilections for general rules bias our better judgment and lead us into error by permitting the golden time to slip.

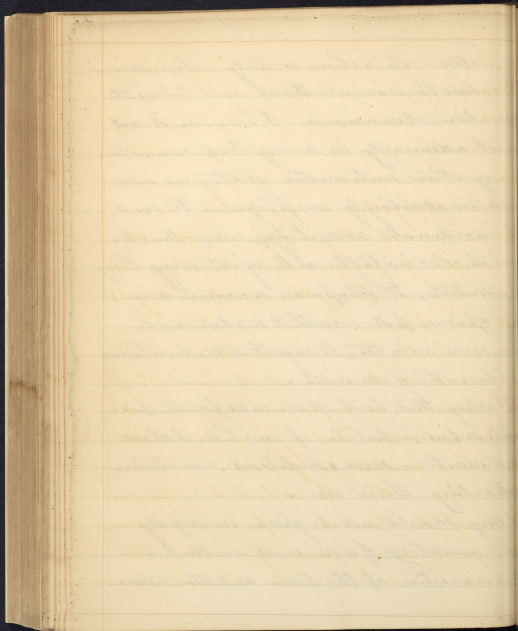
6: It sometimes happens that vomiting proceeds too far and becomes inordinate; To put a stop <sup>to</sup> it, the following substances have been recommended: Some of the cordials, tinctures and aromatic teas &c, with or without Laudanum - the effervescent mixture - carbonated waters - bitters &c. Should then fail, try warm fomentations or stimulating cataplasms to the region of the stomach - Sinapisms to the extremities, anodyne injections, blisters to the epigastric region &c - But above all chicken water should not be



neglected - its action is truly astonishing - it calms the violent throes and turns the operation downwards. I have seen it act most admirably in a very bad case, when many other antispasmodic substances had been unavailingly employed. In cases of inordinate vomiting, when the stomach is so irritable as to reject every thing presented, Dr. Chapman recommends an old opium pill, one that has been made for some months; he says it will be retained when nothing else will.

Having thus laid down rules for the proper administration of emetics, I shall now mention some conditions contraindicating their use.

1. They should not be given in highly inflammatory fevers and violent inflammation of the brain and other viscera.



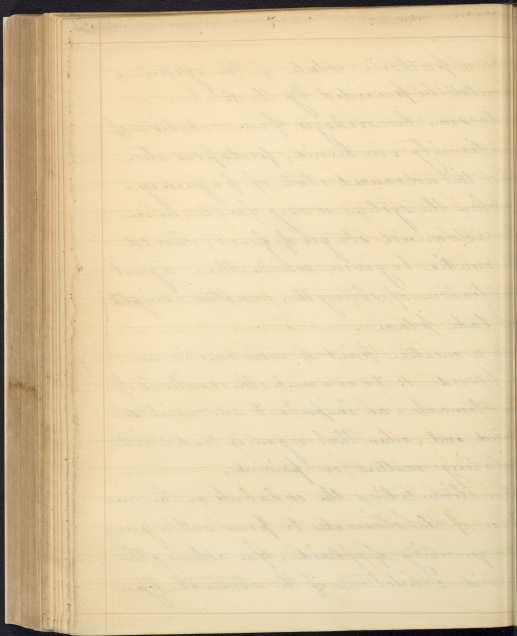
2: In a plethoric state of the system; should be preceded by P.S.

3: In some hemorrhages from solution of continuity: in hernia, prolapsus uteri and the advanced state of puerperia -

4: When the system is very feeble, as in the advanced stages of fevers; should an emetic be given while there is great prostration of strength, reaction might not take place.

In a curative point of view emetics are employed 1: To evacuate the contents of the stomach - an important and much desired end, when that organ is loaded with irritating matters or poisons.

2: For stimulating the exhalants on the surface of the stomach to pour out a greater quantity of fluid; for altering the morbid condition of the stomach by





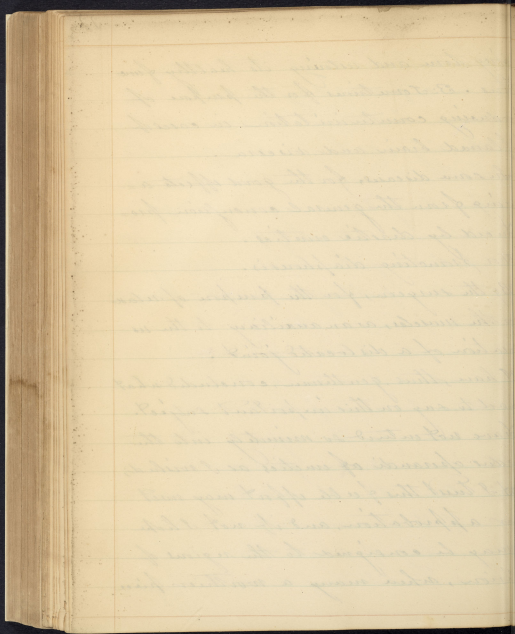
giving tone and restoring its healthy functions. 3: Sometimes for the purpose of producing counterirritation in cases of inflamed brain and viscera.

4: In some diseases, for the good effects arising from the general congestion produced by drastic emetics.

5: For promoting diaphoresis.

6: By the surgeon, for the purpose of relaxing the muscles, as an auxiliary to the restoration of a dislocated joint.

I have, thus, gentlemen, concluded what I had to say on this important subject. I have not entered so minutely into the modes of operandi of emetics as I wished, but I trust this feeble effort may meet your approbation, and if not I hope it may be consigned to the regions of oblivion, where many a worthier piece



has been doomed.

*Thomomys talpoides*

*Thomomys talpoides*

*Thomomys talpoides*

Box 1. 100